

ABSTRACT OF THE DISCLOSURE

DUAL OPTIMALITY FOR DIFFERENT DATA RATE BACKPLANE TRANSFERS

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A switch of a network for switching data. The switch includes a fabric for switching the data. The switch includes a connection mechanism connected to the fabric for providing data to and from the fabric. The switch includes a first port card which receives data at a first rate from the network or sends data at the first rate to the network. The first port card is connected to the connection mechanism to send data to or receive the data from the fabric at a connection rate. The switch includes a second port card which receives data at a second rate from the network or sends data at the second rate to the network. The second port card is connected to the connection mechanism to send data to or receive data from the fabric at the connection rate. The second port card separates the data received at the second rate into streams of data that together equal the data received at the second port card that are sent concurrently at the connection rate to the fabric and combine the data streams received at the connection rate into data that is sent at the second rate to the network. A method for switching data in a network. —The method includes the steps of receiving data at a first rate from the network at a first port card of a switch. Then there is the step of receiving data at a second rate from the network at a second port card of the switch. Next there is the step of sending data from the first port card to a fabric of the switch to a connection mechanism of the switch at a connection rate. Then there is the step of separating the data received at the second rate at the second port card into streams of data that together equal the data received at the second port card. Next there is the step of sending concurrently at the connection rate to the fabric from the second port card the stream of data along the connection mechanism.